

**AMENDMENTS TO THE CLAIMS**

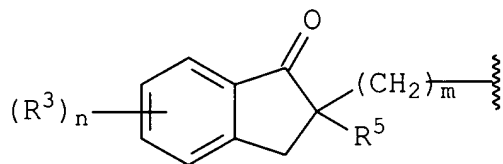
This listing of claims will replace all prior versions, and listings, of claims in the present application.

**Listing of Claims:**

1. (**Currently Amended**) A compound represented by the formula:



a pharmacologically acceptable salt thereof or hydrates thereof, wherein in the formula, R<sup>1</sup> represents the formula:



wherein:

(R<sup>3</sup>)s are the same as or different from each other and each represents hydrogen atom, a halogen atom, hydroxyl group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxyalkoxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group, a cyano C<sub>1-6</sub> alkyl group, an amino C<sub>1-6</sub> alkyl group, a halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub> alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted carbamoyl group, mercapto group or a C<sub>1-6</sub> thioalkoxy group;

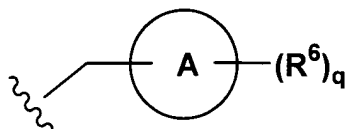
R<sup>5</sup> represents a halogen atom (provided that fluorine is excluded), hydroxy group, a C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group, cyano group, a

halogeno C<sub>1-6</sub> alkyl group, ~~a hydroxy C<sub>1-6</sub> alkyl group~~, a cyano C<sub>1-6</sub> alkyl group, an amino C<sub>1-6</sub> alkyl group, nitro group, an azido group, an optionally substituted amino group, an optionally substituted carbamoyl group, an optionally substituted carboxyl group, mercapto group or a C<sub>1-6</sub> thioalkoxy group;

m is 0 or an integer from 1 to 6; and

n is an integer from 1 to 4; and

R<sup>2</sup> represents a C<sub>3-8</sub> cycloalkylmethyl, a 2,2-(alkylenedioxy)ethyl or a group represented by the formula:



wherein:

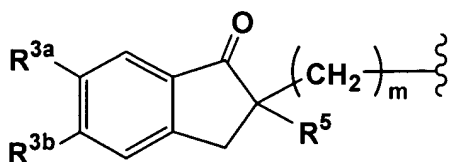
the ring A represents a benzene ring or a heterocyclic ring;

(R<sup>6</sup>)<sub>s</sub> are the same as or different from each other and each represents hydrogen, a halogen atom, hydroxyl group, nitrile group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxyalkoxy group, an aryloxy group, an aralkyloxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group, a cyano C<sub>1-6</sub> alkyl group, a halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub> alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted amide group, mercapto group or a C<sub>1-6</sub> thioalkoxy group, and

two of the  $R^6$  may together form an aliphatic ring, an aromatic ring, a heterocyclic ring or an alkylenedioxy ring; and

$q$  is 0 or an integer from 1 to 5.

2. (**Currently Amended**) The compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof, wherein  $R^1$  is represented by the formula:



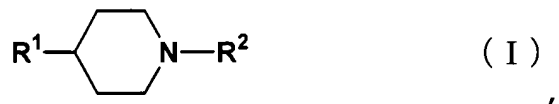
in which  $R^{3a}$  and  $R^{3b}$  are the same as or different from each other and each represents a  $C_{1-6}$  alkoxy group;

$R^5$  represents a halogen atom (provided that fluorine is excluded), hydroxy group, a  $C_{1-6}$  alkyl group, a  $C_{1-6}$  alkoxy group, cyano group, a halogeno  $C_{1-6}$  alkyl group, ~~a hydroxy  $C_{1-6}$  alkyl group~~, a cyano  $C_{1-6}$  alkyl group, an amino  $C_{1-6}$  alkyl group, nitro group, an azido group, an optionally substituted amino group, an optionally substituted carbamoyl group, an optionally substituted carboxyl group, mercapto group or a  $C_{1-6}$  thioalkoxy group; and

$m$  is 0 or an integer from 1 to 6.

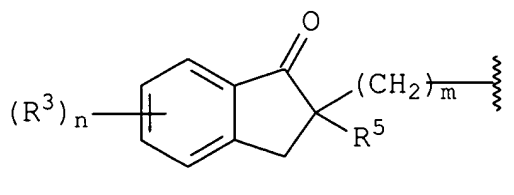
3. (**Original**) The compound according to Claim 2, a pharmacologically acceptable salt thereof or hydrates thereof, wherein  $R^{3a}$  and  $R^{3b}$  are methoxy groups.

4. (Currently Amended) The A compound represented by the formula:



~~according to any of Claims 1 to 3,~~ a pharmacologically acceptable salt thereof or hydrates thereof,

wherein in the formula, R<sup>1</sup> represents the formula:



wherein:

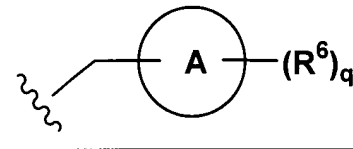
(R<sup>3</sup>)s are the same as or different from each other and each represents hydrogen atom, a halogen atom, hydroxyl group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxyalkoxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group, a cyano C<sub>1-6</sub> alkyl group, an amino C<sub>1-6</sub> alkyl group, a halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub> alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted carbamoyl group, mercapto group or a C<sub>1-6</sub> thioalkoxy group;

~~wherein~~ R<sup>5</sup> is chlorine or bromine.

m is 0 or an integer from 1 to 6; and

n is an integer from 1 to 4; and

R<sup>2</sup> represents a C<sub>3-8</sub> cycloalkylmethyl, a 2,2-(alkylenedioxy)ethyl or a group represented by the formula:



wherein:

the ring A represents a benzene ring or a heterocyclic ring;

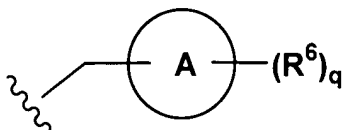
(R<sup>6</sup>)s are the same as or different from each other and each represents hydrogen, a halogen atom, hydroxyl group, nitrile group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxyalkoxy group, an aryloxy group, an aralkyloxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group, a cyano C<sub>1-6</sub> alkyl group, a halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub> alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted amide group, mercapto group or a C<sub>1-6</sub> thioalkoxy group, and

two of the R<sup>6</sup> may together form an aliphatic ring, an aromatic ring, a heterocyclic ring or an alkylenedioxy ring; and

q is 0 or an integer from 1 to 5.

5. (Original) The compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof, wherein m is 1.

6. (**Previously Presented**) The compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof, wherein  $R^2$  is a group represented by the formula:



wherein:

the ring A represents a benzene ring or a heterocyclic ring;

$(R^6)$ s are the same as or different from each other and each represents hydrogen, a halogen atom, hydroxyl group, nitrile group, a  $C_{1-6}$  alkyl group, a  $C_{3-8}$  cycloalkyl group, a  $C_{1-6}$  alkoxy group, a  $C_{1-6}$  alkoxyalkoxy group, an aryloxy group, an aralkyloxy group, a halogeno  $C_{1-6}$  alkyl group, a hydroxy  $C_{1-6}$  alkyl group, a cyano  $C_{1-6}$  alkyl group, a halogeno  $C_{1-6}$  alkoxy group, a hydroxy  $C_{1-6}$  alkoxy group, a cyano  $C_{1-6}$  alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted amide group, mercapto group or a  $C_{1-6}$  thioalkoxy group, and

two of the  $R^6$  may together form an aliphatic ring, an aromatic ring, a heterocyclic ring or an alkylenedioxy ring; and

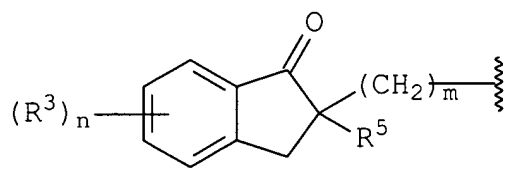
q is 0 or an integer from 1 to 5.

7. (**Original**) The compound according to Claim 6, a pharmacologically acceptable salt thereof or hydrates thereof, wherein the ring A is a benzene ring.

8. (**Currently Amended**) ~~The compound according to Claim 6, A~~  
compound represented by the formula:



a pharmacologically acceptable salt thereof or hydrates thereof, wherein  
in the formula, R<sup>1</sup> represents the formula:



wherein:

(R<sup>3</sup>)s are the same as or different from each other and each  
represents hydrogen atom, a halogen atom, hydroxyl group, a C<sub>1-6</sub>  
alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub>  
alkoxyalkoxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl  
group, a cyano C<sub>1-6</sub> alkyl group, an amino C<sub>1-6</sub> alkyl group, a  
halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub>  
alkoxy group, a lower acyl group, nitro group, an optionally  
substituted amino group, an optionally substituted carbamoyl group,  
mercapto group or a C<sub>1-6</sub> thioalkoxy group;

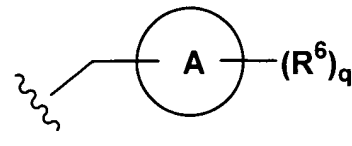
R<sup>5</sup> represents a halogen atom (provided that fluorine is  
excluded), hydroxy group, a C<sub>1-6</sub> alkyl group, a C<sub>1-6</sub> alkoxy group,  
cyano group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group,

a cyano C<sub>1-6</sub> alkyl group, an amino C<sub>1-6</sub> alkyl group, nitro group, an azido group, an optionally substituted amino group, an optionally substituted carbamoyl group, an optionally substituted carboxyl group, mercapto group or a C<sub>1-6</sub> thioalkoxy group;

m is 0 or an integer from 1 to 6; and

n is an integer from 1 to 4; and

R<sup>2</sup> represents a C<sub>3-8</sub> cycloalkylmethyl, a 2,2-(alkylenedioxy)ethyl or a group represented by the formula:



wherein the ring A is a pyridine ring;

(R<sup>6</sup>)s are the same as or different from each other and each represents hydrogen, a halogen atom, hydroxyl group, nitrile group, a C<sub>1-6</sub> alkyl group, a C<sub>3-8</sub> cycloalkyl group, a C<sub>1-6</sub> alkoxy group, a C<sub>1-6</sub> alkoxyalkoxy group, an aryloxy group, an aralkyloxy group, a halogeno C<sub>1-6</sub> alkyl group, a hydroxy C<sub>1-6</sub> alkyl group, a cyano C<sub>1-6</sub> alkyl group, a halogeno C<sub>1-6</sub> alkoxy group, a hydroxy C<sub>1-6</sub> alkoxy group, a cyano C<sub>1-6</sub> alkoxy group, a lower acyl group, nitro group, an optionally substituted amino group, an optionally substituted amide group, mercapto group or a C<sub>1-6</sub> thioalkoxy group, and two of the R<sup>6</sup> may together form an aliphatic ring, an aromatic ring, a heterocyclic ring or an alkylenedioxy ring; and

q is 0 or an integer from 1 to 5.



9. (Original) The compound according to Claim 6, a pharmacologically acceptable salt thereof or hydrates thereof, wherein q is an integer of 1 or 2.

10. (Currently Amended) The compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof, which is selected from the group consisting of:

1-benzyl-4-[(5,6-dimethoxy-2-chloro-1-indanon)-1-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-bromo-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-iodo-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-hydroxy-1-indanon)-2-

yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-methyl-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-ethyl-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-azido-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-amino-1-indanon)-2-yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-methylamino-1-indanon)-2-

yl]methylpiperidine,

1-benzyl-4-[(5,6-dimethoxy-2-dimethylamino-1-indanon)-2-

yl]methylpiperidine, and

1-benzyl-4-[(5,6-dimethoxy-2-acetamide-1-indanon)-2-

yl]methylpiperidine.

Application No. 10/069,073

Art Unit 1624

Reply to Office Action of September 27, 2004

~~1-benzyl-4-[(5,6-dimethoxy-2-methanesulfonamide-1-indanon)-2-yl]methylpiperidine,~~  
~~3-(1-benzylpiperidin-4-yl)-2-chloro-1-(2,3,4,5-tetrahydro-1H-1-benzoazepin-8-yl)-1-propanone,~~  
~~3-(1-benzylpiperidin-4-yl)-2,2-dichloro-1-(2,3,4,5-tetrahydro-1H-1-benzoazepin-8-yl)-1-propanone,~~  
~~5,7-dihydro-3-[1-chloro-2-[(1-(phenylmethyl)-4-piperidinyl]ethyl]-6H-pyrrolo[4,5-f]-1,2-benzoisoxazol-6-one,~~  
~~5,7-dihydro-3-[1,1-dichloro-2-[(1-(phenylmethyl)-4-piperidinyl]ethyl]-6H-pyrrolo[4,5-f]-1,2-benzoisoxazol-6-one,~~  
~~1-(2-methyl-6-benzothiazolyl)-3-[1-(phenylmethyl)-4-piperidinyl]-2-chloro-1-propanone, and~~  
~~1-(2-methyl-6-benzothiazolyl)-3-[1-(phenylmethyl)-4-piperidinyl]-2,2-dichloro-1-propanone.~~

11-14. (Canceled)

15. (Currently Amended) A medical composition comprising:

a pharmacologically effective amount of the compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof; and

a pharmacologically acceptable carrier.

**Application No. 10/069,073**

**Art Unit 1624**

**Reply to Office Action of September 27, 2004**

16-20. (**Canceled**)

21. (**Previously Presented**) A method of treating or ameliorating various types of senile dementia or cerebrovascular dementia, which comprises administering a pharmacologically effective amount of the compound according to Claim 1, a pharmacologically acceptable salt thereof or hydrates thereof to a patient.